

Appl. No. 10/723,994  
Amdt. dated Dec. 11, 2006  
Response to Office Action mailed August 10, 2006

**REMARKS/ARGUMENTS**

Applicants respectfully request reconsideration of this application in view of the foregoing amendments to claims and the following comments.

In the Office Action mailed August 10, 2006, pending claims 1-7, 20-25, and 27-39 were rejected under 35 U.S.C. § 103(a), as follows:

- Claims 1-7, 20-25, and 27-39, based on U.S. Patent No. 722,927 to Swift ("Swift '927");
- Claims 20 and 22-24, based on Swift '927 in view of specified "Official Notices";
- Claims 1-7, 20-25, and 27-39, based on U.S. Patent No. 749,174 to Davis ("Davis '174"); and
- Claims 20 and 22-24, based on Davis '174 in view of specified "Official Notices".

By this Amendment, Applicants have canceled dependent claims 20-25, 27, 28, 30-32, 34, and 35. New dependent claim 43 has been added. Claims 1-7, 29, 33, 36-39, and 43 remain pending in this application. Applicants respectfully traverse these rejections for the reasons set forth below.

**Obviousness Rejection of Claims 1-7, 29, 33, and 36-39 Based on Swift '927**

As mentioned above, claims 1-7, 29, 33, and 36-39 were rejected under 35 U.S.C. § 103(a), as allegedly obvious over Swift '927.

Swift '927 discloses a golf-stick or driver, including a face plate B having a latticework of ribs or corrugations B<sup>2</sup>, as shown in Fig. 1. These ribs or corrugations are contiguous with each other, with no separation distance between adjacent projections. The ribs form one continuous latticework and the geometric shapes formed by the ribs are not spaced apart from one another. This structure differs significantly from Applicants' claimed invention.

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Amended independent claim 1 defines a golf club head including a forward striking face having a plurality of discrete, solid geometric shapes projecting forward from the recessed surface. The geometric shapes are defined to be spaced apart from each other by at least 0.1 mm, each geometric shape is defined to have a volume of less than 0.0007 mm<sup>3</sup>, and the total volume of the geometric shapes contained within a square reference region on the forward striking face measuring 2.5 mm by 2.5 mm is less than 0.05 mm<sup>3</sup>. Additionally, the recessed surface is defined to be substantially planar, and the geometric shapes are defined to be spaced apart from each other by the specified amount "*along the recessed surface.*" The substantially planar recessed surface, therefore, must lie between adjacent geometric shapes. This effectively excludes patterns of geometric shapes that are contiguous with each other (e.g., Swift '927s' continuous latticework) such that they lack any intervening portion of a substantially planar recessed surface.

In the Office Action, the Examiner stated as follows:

The specification provides no unexpected or surprising results in using the dimensions cited, therefore these limitations are considered design choices. It would have been obvious to one of ordinary skill in the art to have selected the appropriate dimension for the grooves, planar surfaces, and volume of the geometric shape based on manufacturing and marketing decisions.

Applicants respectfully disagree with the Examiner's assertion.

The cited art fails to disclose any performance parameters for the club heads disclosed in the references. It would also be extremely onerous for Applicants to make prototypes of the club heads disclosed in the cited references in order to determine the performance parameters and, thus, show that the specific parameters and volumes claimed by Applicants give rise to unexpected or surprising results in comparison to the cited art.

However, it is important to note that Applicants' specification discloses the overall benefits and advantages of using club heads with the claimed geometric shapes in

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comparison to club heads without the geometric shapes. Specifically, in paragraph 40, the specification provides that the invention enhances the performance of the golf club head by providing an increased high backspin, a lower launch angle, and a higher ball speed, as compared to golf club heads not incorporating the invention. The cited references, including Swift '927, fail to disclose these advantages and benefits. Thus, based on a totality of the circumstances, the Examiner is precluded from finding that Applicants' claimed dimensions and volumes are merely obvious design choices.

Accordingly, Swift '927 patent fails to disclose a striking face with geometric shapes that are spaced apart from each other along the recessed surface by at least 0.1 mm, wherein each geometric shape is solid and has a volume of less than 0.0007 mm<sup>3</sup>, and wherein the total volume of the geometric shapes contained within a square reference region on the forward striking face measuring 2.5 mm by 2.5 mm is less than 0.05 mm<sup>3</sup>, as recited in claim 1. A wholesale modification of the Swift '927 golf stick, therefore, would be required to arrive at Applicants' claimed invention. For these reasons, the rejection of independent claim 1 based on Swift '927 is improper and should be withdrawn.

Independent claim 29 is directed to a wedge-type golf club head including a forward striking face having a recessed surface and a regular pattern of discrete geometric shapes projecting from the recessed surface, wherein each such geometric shape is solid, has a volume of less than 0.0007 mm<sup>3</sup>, and is separated from other geometric shapes along the recessed surface by a distance of at least 0.1 mm.

As discussed above, Swift '927 fails to disclose a striking face having a plurality of discrete, solid geometric shapes projecting from the surface separated from adjacent shapes by a distance of at least 0.1 mm, wherein each geometric shape is solid and has a volume of less than 0.0007 mm<sup>3</sup>, and wherein the total volume of the geometric shapes contained within a square reference region on the forward striking face measuring 2.5 mm by 2.5 mm is less than 0.05 mm<sup>3</sup>, as recited in claim 29. The geometric shapes in Swift '927 are contiguous with each other. They are not separated from each other by the specified minimum distance along the

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recessed surface. Additionally, as discussed above, Applicants claimed dimensions and volumes are not obvious design choices.

Thus, a wholesale modification of Swift '927 golf stick would be required to arrive at Applicants' claimed invention. For these reasons, the rejection of independent claim 29 based on Swift '927 is improper and should be withdrawn.

Claims 2-7 and 36-39 all depend from independent claim 1, and claim 33 depends from independent claim 29. These dependent claims add structural features that further distinguish over the disclosure of Swift '927. For these reasons, and for the reasons set forth above with respect to independent claims 1 and 29, the rejections of these dependent claims based on Swift '927 are improper and should be withdrawn.

**Obviousness Rejection of Claims 1-7, 29, 33, and 36-39 Based on Davis '174**

As mentioned above, claims 1-7, 29, 33, and 36-39 were rejected under 35 U.S.C. § 103(a), as allegedly obvious over Davis '174.

Davis '174 discloses a golf putter including four striking faces having roughened surfaces, so as to have "a good contact with the ball." As shown in Fig. 2, the roughened surface appears to comprise square-like projections. Based on the proportions depicted in Fig. 2, Applicants calculate that each square-like projection appears to have a length, width, and height of approximately 1.0 mm and a total volume of approximately 1.0 mm<sup>3</sup>, and each projection is separated from its neighboring projections by about 1.0 mm. Therefore, in a reference region of 2.5 mm by 2.5 mm, the total volume of the geometric shapes contained within the reference region is calculated to be about 170 mm<sup>3</sup>, which is several orders of magnitude greater than 0.05 mm<sup>3</sup>, as recited in claim 1.

Contrary to the Examiner's assertions, the Davis '174 golf putter head structure differs significantly from Applicants' claimed invention. As discussed above in connection with the obviousness rejection based on Swift '927, independent claims 1 and 29 both define a golf club head having a pattern of discrete, geometric shapes projecting from a substantially planar recessed surface, wherein each geometric shape is solid and has a volume of less than

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0.0007 mm<sup>3</sup>, and wherein the total volume of the geometric shapes contained within a square reference region on the forward striking face measuring 2.5 mm by 2.5 mm is less than 0.05 mm<sup>3</sup> (in claim 1) and less than 0.02 mm<sup>3</sup> (in claim 29). This effectively excludes the roughened surface comprising square-like projections disclosed in Davis '174. A wholesale modification of the Davis '174 golf putter head, therefore, would be required to arrive at Applicants' claimed invention.

Additionally, as discussed above, the cited art fails to disclose any performance parameters for the club heads disclosed in the references. Thus, it would be extremely difficult for Applicants to show that the specific parameters and volumes recited in the claims give rise to unexpected or surprising results in comparison to the cited art. Applicants' specification discloses the overall benefits and advantages of using club heads with the claimed geometric shapes in comparison to club heads without the geometric shapes. Thus, based on a totality of the circumstances, the Examiner is precluded from finding that Applicants claimed dimensions and volumes are merely obvious design choices.

For these reasons, the obviousness rejections of independent claims 1 and 29 based on Davis '174 are improper and should be withdrawn.

Claims 2-7 and 36-39 all depend from independent claim 1, and claim 33 depends from independent claim 29. These dependent claims add structural features that more particularly define the invention and thus further distinguish over the disclosure of Davis '174. For these reasons, and for the reasons set forth above with respect to independent claims 1 and 29, the obviousness rejections of dependent claims 2-7, 33, and 36-39 based on Davis '174 are improper and should be withdrawn.

#### New Claim 43

By this Amendment, Applicants have added new dependent claim 43. Claim 43 depends from independent claim 1, and should be allowable for the same reasons claim 1 is allowable.

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CONCLUSION

The foregoing remarks should place this application in condition for allowance. If the Examiner believes that a telephone conference with Applicants' undersigned representative might expedite the prosecution of the application, he is respectfully requested to call at the telephone number indicated below. As indicated in the accompanying transmittal form, please charge any fees due in connection with this filing to our Deposit Account No. 19-1853.

Date: December 11, 2006

Respectfully submitted,

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